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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,376	06/28/2001	Naoki Ayai	017700-0148	3972
22428	7590	10/10/2003	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			PATEL, ISHWARBHAI B	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/869,376		AYAI ET AL.	
	Examiner		Art Unit	
	Ishwar (I. B.) Patel		2827	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 7-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) : _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Specie I, reading on figure 1, claims 1-6 and 39, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seuntjens et al., US Patent No. 6,397,454, hereafter Seuntjens, in view of Sukeyuki et al., Japanese Patent Publication Number 07169342 A, hereafter, Sukeyuki, provided by the applicant.

Regarding claims 1 and 39, Seuntjens discloses an oxide high-temperature superconducting wire comprising:

an oxide superconductor (oxide superconductor 12, see figure 1, column 6, line40-50);

a sheath formed of a material containing silver, and covering said oxide superconductor (ductile metal matrix 14, see figure 1, column 6, line 40-50 and matrix made of silver and its alloys, see column 9, line 35-50);

a high-resistance element coating said sheath (high resistivity layer 14); and

a coating formed of a material coating said high-resistance element (conductive jacket 18, see figure 1, column 6, line 40-50, but

fails to disclose the resistance element is strontium-vanadium oxide and the outer coating contain silver.

However, Seuntjens further discloses that high resistivity coating is preferably metal oxide and will depend upon the anticipated use of oxide superconductor and the method by which it is produced. Further, it is advisable to use the oxide of metal used for superconductor to avoid contamination of the superconductor by a foreign metal.

A person of ordinary skill in the art will use strontium oxide for resistive layer if superconductor is made of strontium based material.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the resistive element of strontium oxide in the super conductor of Seuntjens in order to avoid possible contamination of the superconductor by a foreign metal.

Regarding the outer layer containing silver, it is well known in the art to use silver based coating because of its low electrical resistance and high malleability and better resistance to corrosion.

Furthermore, Sukeyuki discloses using metal matrix containing silver for its better heat and electrical conductivity.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the superconductor of Seuntjens with the out coating containing silver, as taught by Sukeyuki, in order to have better heat and electrical conductivity and better corrosion resistance.

Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416

Regarding claim 2, Seuntjens further discloses a plurality of said sheaths with said high-resistance element interposed there between, see figure 2.

Regarding claim 3, Seuntjens further discloses said oxide superconductor is provided in a from of a filament, filament 12, see figure 1.

Regarding claim 4, the combination of Seuntjens and Sukeyuki further discloses that any suitable metal oxide can be used, as applied to claim 1 above, which may be selected from the group consisting of $\text{Sr}_6\text{V}_2\text{O}_{11}$ and SrV_2O_6 .

Regarding claim 5, Seuntjens further discloses said sheath and said coating are formed of silver or silver alloy, as applied to claim 1 above.

Regarding claim 6, Seuntjens further discloses the superconducting wire is a Bi(Pb)-Sr-Ca-Cu-O based superconductor, see column 8, line 22-44.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Celik et al., discloses high temperature superconductor with an insulating coating.

Nagata Masakatsu et al., discloses a high temperature superconductor with high resistive coating layer 5.

Takagi Akira discloses a superconductor with high resistance coating.


Art Unit: 2827

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (8:30 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703) 308 1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305 3900.

ibp


EVAN PERT
PRIMARY EXAMINER